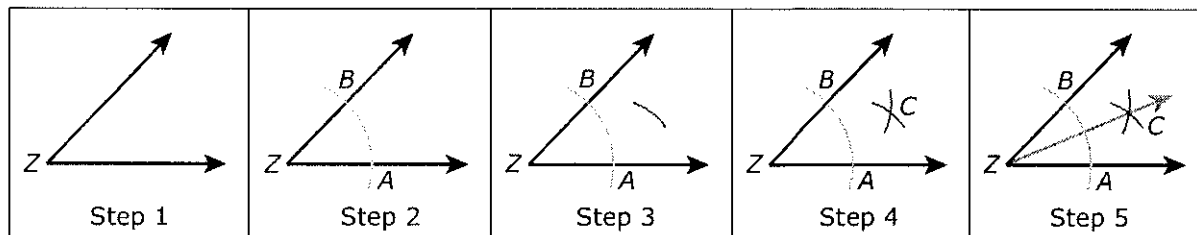




Use the information provided to answer Part A and Part B for question 9.

Marcella drew each step of a construction of an angle bisector.

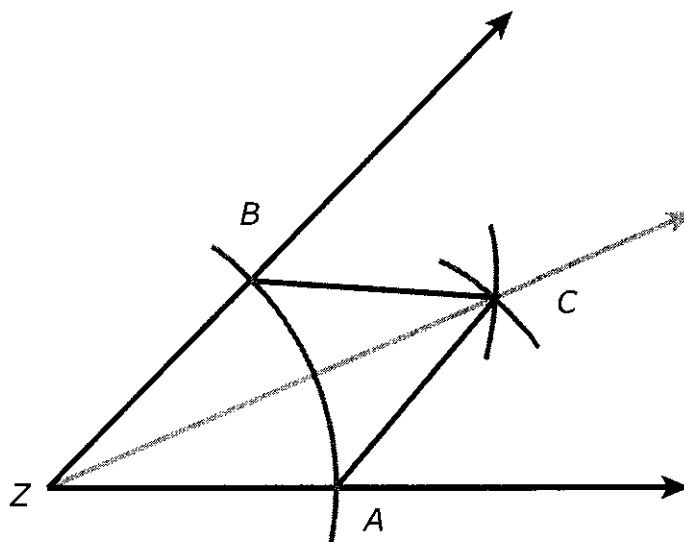


9. Part A

Angle Z is given in Step 1. Describe the instructions for Steps 2 through 5 of the construction. Enter your description in the space provided.

**Part B**

Marcella wants to explain why the construction produces an angle bisector. She makes a new step with line segments AC and BC added to the construction, as shown.



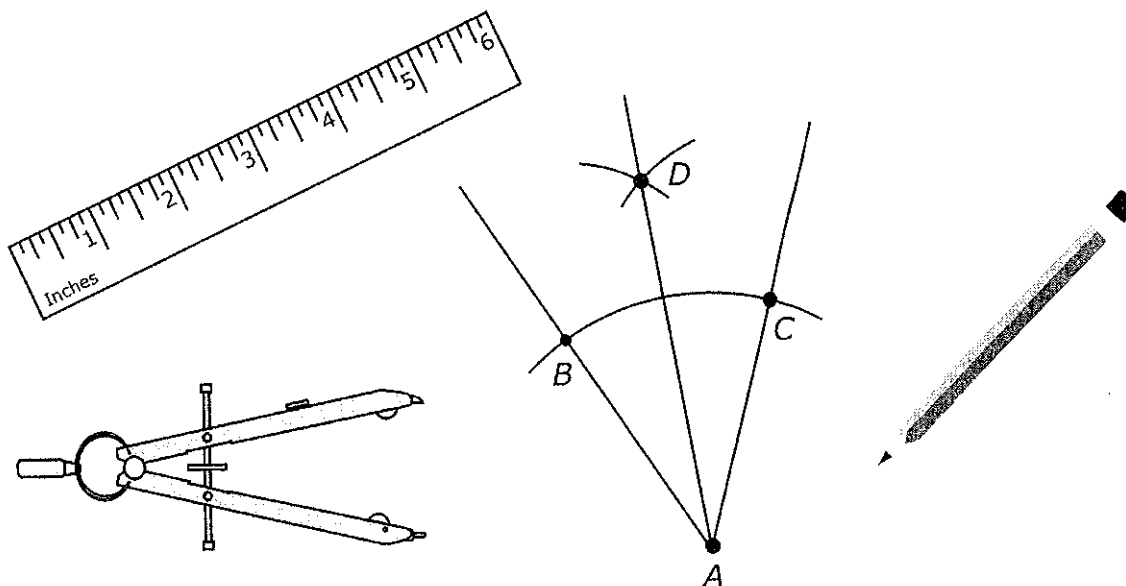
Using the figure, prove that ray ZC bisects angle AZB . Be sure to justify each statement of your proof.

Enter your proof in the space provided.



Use the information provided to answer Part A and Part B for question 25.

The figure shows the result of a geometric construction.



25. Part A

The first step of the construction is to draw an arc centered at point A that passes through point B and point C. What is established by the first step?

(A) $\overline{AB} \cong \overline{BC}$

(B) $\overline{AB} \cong \overline{AC}$

(C) $\overline{AD} \cong \overline{AC}$

(D) $\overline{BD} \cong \overline{CD}$ ← D is cut off - it's not D :).

Part B

The construction creates congruent triangles. $\triangle ABD \cong \triangle ACD$ (not shown). Which statement provides evidence that \overline{AD} is the angle bisector of $\angle BAC$?

(A) $\angle ACD \cong \angle ABD$

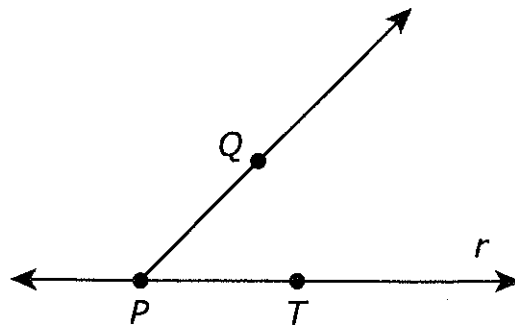
(B) $\angle BAC \cong \angle BDC$

(C) $\angle BAD \cong \angle CAD$

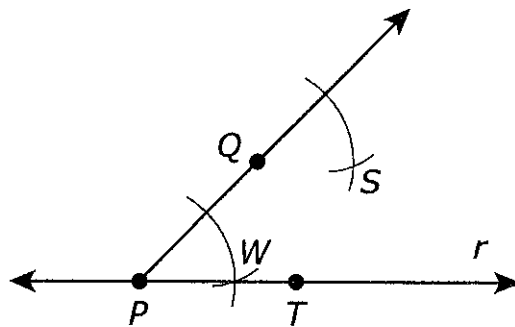
(D) $\angle BAD \cong \angle ABD$

Use the information provided to answer Part A and Part B for question 32.

The figure shows line r , points P and T on line r , and point Q not on line r . Also shown is ray PQ .



32. Part A



Consider the partial construction of a line parallel to r through point Q . What would be the final step in the construction?

- A. draw a line through P and S
- B. draw a line through Q and S
- C. draw a line through T and S
- D. draw a line through W and S

Part B

Once the construction is complete, which of the reasons listed contribute to proving the validity of the construction?

- A. When two lines are cut by a transversal and the corresponding angles are congruent, the lines are parallel.
- B. When two lines are cut by a transversal and the vertical angles are congruent, the lines are parallel.
- C. Definition of segment bisector
- D. Definition of an angle bisector